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STATE OF ALASKA

William A. Egan, Governor

ANNUAL REPORT OF PROGRESS, 1962 - 1963

FEDERAL AID IN FISH RESTORATION PROJECT F-5-R-4

SPORT FISH INVESTIGATIONS OF ALASKA

Alaska Department of Fish and Game

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INTRODUCTION

This report of progress consists of Job Segment Reports from the State of Alaska Federal Aid in Fish Restoration Project F-5-R-4, "Sport Fish Investigations of Alaska".

The project is composed of 25 separate studies designed to evaluate the various aspects of the State's recreational fishery resources. While some studies are of a more general nature and deal with gross investigational projects, others have been developed to evaluate specific problem areas. These include studies of king salmon, silver salmon, grayling and State Access requirements. The information gathered will provide the necessary background data for a better understanding of local management problems and development of future investigational studies.

The assembled progress reports may be considered fragmentary in many respects due to the continuing nature of the respective studies. The interpretations contained therein, therefore, are subject to re-evaluation as work progresses and additional information is acquired.

Volume 4 Report No. 10-D-1

JOB COMPLETION REPORT

RESEARCH PROJECT SEGMENT

State: ALASKA Name: Sport Fish Investigations of Alaska.

Project No: F-5-R-4 Title: Creel Census and Population Sampling of the Sport Fishes in the Cook Inlet and Bristol Bay Drainage

Job No: 10-D-1

Sub Job No: A Subtitle: Lake Louise Creel Census

Period Covered: June 3, 1962 through September 8, 1962

Abstract:

The creel census study at Lake Louise was continued in 1962 at the two military Rest and Recreation Camps.

During the season, 1,392 anglers submitted complete census forms showing a total expenditure of 4,085.6 hours of effort to take 407 lake trout, 391 grayling and 23 whitefish. Sixty-four anglers returned incomplete forms, for a total number of 1,456 anglers for the season. A 103.2 per cent increase in anglers, a 59.7 per cent increase in hours of effort, and a 24.9 per cent decrease in fish per angler hour compared with 1961 were noted. The lower catch success was distributed equally over all fish species, and no decrease in length frequencies occurred.

Recommendations:

1. A more simplified census form designed solely for the Lake Louise program is necessary. The present form contains unnecessary verbiage and requests which contribute to confusion and incomplete reports.

2. It is recommended that the military be requested to continue the creel census program for evaluation of future fish population trends. The sudden rise in angling pressure in 1962 demands continued close evaluation of the angling impact on sport fish stocks. The procedures should be refined and the fishing closely evaluated during the following years to determine if a reduction in the sport fish take is needed.

Objectives:

To investigate and measure the sport fish population trends of the waters of Lake Louise.

To determine the expansion of angling pressure and their impact on the sport fish resources of the area.

To provide recommendations for future investigation and management of these waters.

Techniques Used:

The census study at Lake Louise was accomplished with the cooperation of the U. S. Army and U. S. Air Force at their Rest and Recreation Camps. In continuation of a study initiated by the Bureau of Sport Fisheries and Wildlife, the military assumed responsibility for data collection by making mandatory the completion of one census form by each fisherman. The military staff at each camp supervised collection of data using facilities at the boat docks. The individual census forms, supplied by the Department of Fish and Game, were designed to gain information indicating the number, length, and weight of fish taken by species, the number of anglers, and the hours of angling effort expended. Facilities at the camps were examined by the district biologist at the beginning of the fishing season in early June. Instructions were given to personnel involved in data collection.

Completed forms for the season were delivered to the Department of Fish and Game for compilation and evaluation. The data does not include information from the three lodges, public campground, and numerous summer cabins.

Findings:

From June 3 to September 8, 1962, 1,392 anglers filled out complete census forms showing a total of 4,085.6 hours of effort expended to take 407 lake trout, 391 grayling and 23 whitefish (Table 1). An additional 64 men returned incomplete census forms, bringing the total participation at the camps to 1,456 fishermen for 1962.

The most important result of the 1962 study is the 103.2 per cent increase in fishermen, and resulting 59.7 per cent increase in hours of fishing effort over that of 1961 (Table 2). The over-all season catch success of .19 fish per angling hour represents a decrease of 24.9 per cent from that of 1961, and of 32.6 per cent from 1960. The decrease is distributed equally over the three game fish species involved. Table 2 shows that length frequencies have undergone no significant change over the past three seasons. Lake trout, which withstand the greatest pressure, appear to be increasing slightly in average size, while the seldom fished for whitefish show a slight size decrease.

A detailed size class frequency comparison of lake trout taken in 1962 is included as Table 3. The most abundant grouping falls in the 18 to 24 inch size range. This grouping also fell into the 18 to 24 inch range in 1961, and into the 17 to 23 inch range in 1960. The reduced number of fish in Table 3 was due to failure of some anglers to record the lengths of their catches.

Table 1. Species caught, hours fished, in bi-weekly periods at Lake Louise military rest and recreation camps, from June through August 1962.

Fishing Period	6-3 6-16	6-17 6-30	7-1 7-14	7-15 7-28	7-29 8-11	8-12 8-25	8-26 9-8	Totals
NUMBER								
Whitefish		1	2	15	5			23
Grayling	3	43	107	81	63	86	8	391
Lake Trout	11	163	91	96	36	8	2	407
Totals	14	207	200	192	104	94	10	821
Fishermen	31.0	352.0	302.0	355.0	215.0	114.0	23.0	1,392.0
Man Hours	92.8	1,055.0	866.5	1,090.0	599.0	296.3	86.0	4,085.6
F./hour	.15	.196	.23	.176	.173	.317	.116	.194 *
F./angler	.45	.59	.66	.54	.48	.82	.43	.57 *

Species	WF	GR	L.T.
Mean Length (inches)	12.35	11.52	23.11
Mean Weight	1.08	.83	6.43

* Average

Table 2. A three year summary of fishing effort, catch success, and fish population trends at Lake Louise.

Year	No. of Anglers	Hours of Effort	Fish per Hour	Mean Length and Weight *LT in.	*LT lb.	*GR in.	*GR lb.	*WF in.	*WF lb.
1960	718	2,427.0	.288	20.9	4.1	12.2	1.2	14.3	1.4
1961	685	2,559.0	.258	22.2	4.9	11.5	.74	12.7	1.2
1962	1392	4,085.6	.194	23.1	6.4	11.5	.83	12.4	1.1

*
LT - Lake Trout

GR - Grayling

WF - Whitefish

Table 3. Size Class Frequence Comparisons of the Lake Trout of Lake Louise, by Fishing Periods, 1962.

Size in Inches	6-3 6-16	6-17 6-30	7-1 7-14	7-15 7-28	7-29 8-11	8-12 8-25	8-26 9-8	Totals	%
12-14			2	7	2	1		12	3.0
14-16		5	4	13	1	1		24	6.0
16-18	2	7	15	8	2	1		35	8.8
18-20	1	25	17	7	4	3	2	59	14.8
20-22	2	34	11	19	6			72	18.0
22-24	3	22	12	8	1			46	11.5
24-26	1	11	5	7	7			31	7.8
26-28		10	5	4	3	1		23	5.8
28-30		6	3	1	3			13	3.3
30-32		17	4	7				28	7.0
32-34		13	6	5	1			25	6.2

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Table 3 (Con't).

Size in Inches	6-3 6-16	6-17 6-30	7-1 7-14	7-15 7-28	7-29 8-11	8-12 8-25	8-26 9-8	Totals	%
34-36		5	6	7	2	1		21	5.3
36-38		2	1	1	2			6	1.5
38-40		1		2	1			4	1.0
TOTAL								399	

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